

The Analysis of Emerging Policy Issues in Development Finance

Sudarshan Gooptu

A survey of recent economic literature and a case for improving capacity in developing countries to monitor and analyze data on private capital flows, especially portfolio investment flows (through both debt and non-debt instruments)



Summary findings

Gooptu makes a case for improving capacity in developing countries to monitor and analyze data on private capital flows, especially portfolio investment flows (through both debt and non-debt instruments).

He surveys recent economic literature and identifies unanswered international finance-related policy questions being grappled with in developing countries. From this he deduces the tremendous need for better data to analyze important economic issues (with a focus on data related to external debt and financial flows).

Gooptu provides an overview of recent trends in financial flows to developing countries, highlighting the surge of private capital flows to a few such countries in the 1990s. He traces some of the major policy issues dealt with in the 1980s and describes the analysis and discussions behind policy decisions. He concludes by suggesting some policy issues that are important today in development finance — and which research agenda might be fruitful for examining changing debt structure and financial flows.

This paper — a product of the International Finance Division, International Economics Department — is part of a larger effort in the department to address issues related to the economic management of capital flows to developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rose Vo, room N3-046, telephone 202-473-1047, fax 202-522-3277, Internet address hvo1@worldbank.org. April 1996. (24 pages)

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The Analysis of Emerging Policy Issues in Development Finance

A SURVEY OF THE LITERATURE

by

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A SURVEY OF THE LITERATURE *

A solid analytical foundation is the key to formulating sound economic policies, the challenge is to ensure that there exists an appropriate analytical framework that can be applied to developing countries and that can be used to address the policy question at hand today rather than tomorrow. It is a challenge because the world of development finance, that one must endeavor to keep up with and explain on the basis of sound fundamentals, is a rapidly changing one. But this is also what makes this task all the more interesting.

Introduction

In any endeavor to undertake analytical research on developing countries, one is often faced with incomplete information about key economic variables that are required to make effective policy decisions. This is due to the fact that factor markets may be imperfect, there may be no institutional structure in the country for monitoring these key variables (such as private portfolio investment flows), and in several countries one faces a lack of institutional capacity (in terms of highly skilled staff) in the Government to efficiently manage the information and effectively use it make policy decisions on a day-to-day basis. Often the lack of timely, reliable and consistent data series on key variables mitigate any econometric testing of sophisticated economic models in developing countries. For example, rigorous analytical work on the policy implications of the use of derivatives in developing countries has become possible only until very recently, although these markets may have been in existence for quite a while. The market for Brazilian derivative instruments is one of the largest markets in the world. Also, Mexico's Telmex is the second most actively traded listed equity option in the United States.

* I am grateful for the comments and suggestions on an earlier draft of this paper from Sarwar Lateef, Leonardo Hernandez, and seminar participants at the University of Illinois, Urbana-Champaign.

This paper makes the case for improving the data monitoring and analytical capacity in developing countries on private capital flows, particularly portfolio investment flows (through both debt and non-debt instruments). The approach taken is to provide a survey of the recent economic literature and identify some of the unanswered policy questions that one is grappling with in developing countries and, consequently, deduce the tremendous data needs one is faced with in order to begin to rigorously analyze these issues. Section I provides an overview of recent trends in financial flows to developing countries which highlights the surge of private capital flows to a few developing countries that took place in the 1990s. Section II traces some of the major policy issues that have been dealt with in the 1980s and mentions some of the analytical discussions in the profession at the time that went behind the policy decisions that were made in the developing countries concerned. Section III suggests some of the policy issues that one is grappling with in the context of development finance and the fruitful research agenda that emerges from the changing structure of debt and financial flows to developing countries in the 1990s. It should be noted at the outset that, in order to keep the scope of this paper manageable, it focuses on issues that are a consequence of the external debt and financial flows to developing countries rather than those arising in the trade sector or from issues related to domestic macroeconomic management in these countries.

I . The Changing Nature of Development Finance

The 1990s have seen a dramatic change in the structure of international capital inflows to developing countries. This has occurred in conjunction with a rapid and sharp increase in external financing to developing countries (Figure 1). After a virtual stagnation, there was almost a doubling of the volume of net long-term foreign financing to these countries between 1988-90 and 1991-93 (from US\$88.5 billion per annum to 163.6 billion per annum, on average respectively)¹ and further increasing to a record \$231 billion by 1995.² There has also been a dramatic increase in private capital flows to developing

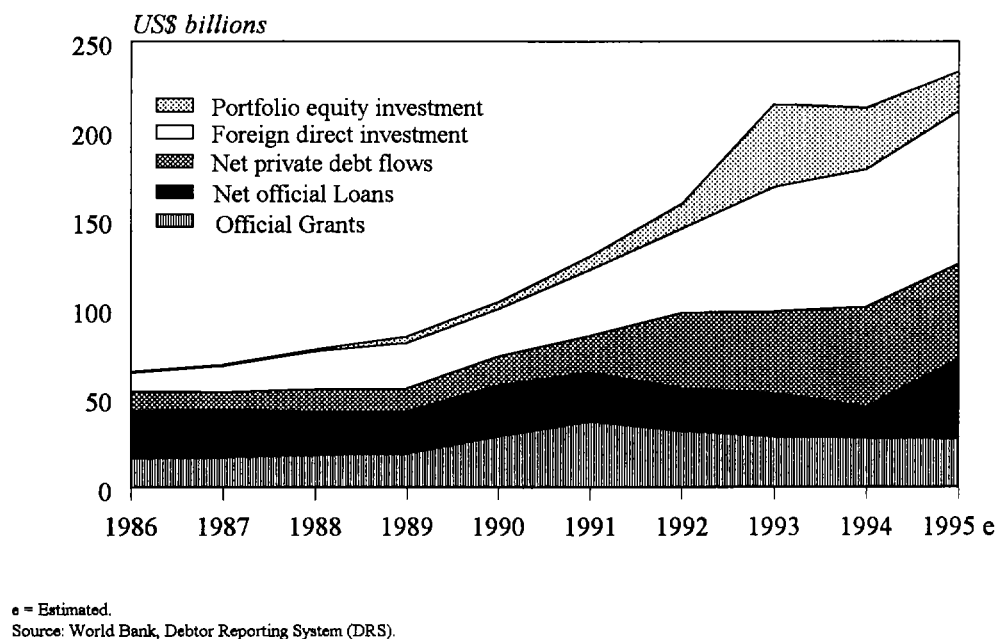
¹ Source World Bank, *World Debt Tables, 1994-95*, Volume 1.

² Source: World Bank, *World Debt Tables, 1996*, Volume 1.

countries in the 1990s. About \$167 billion in private capital flows to these countries were recorded in 1995 accounting for three-fourths of the total net aggregate long-term resource flows to developing countries that year, up from 44 percent in 1990. This is mainly attributed to the spectacular rise in portfolio flows (in the form of bonds and equities) and strong growth in foreign direct investment (FDI).³

Figure 1

Aggregate net resource flows to developing countries, 1986-95



This episode is different from the past in that not only has the magnitude of private capital flows to developing countries in the 1990s been significantly larger than the 1970s, the investor base and range of instruments of private flows are wider now. The recipients of capital flows within developing countries are also changing. Unlike the late 1970s, when private capital to developing countries flowed mainly to sovereign and parastatal

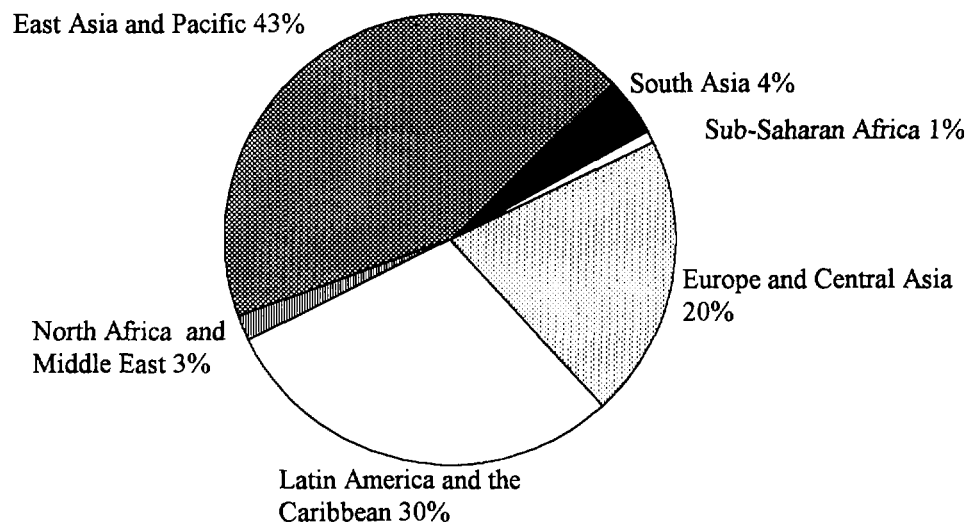
³ Ibid.

borrowers, the 1990s have seen a sharp rise in net resource flows to the private sector in recipient countries.

Portfolio equity flows have been the most rapidly growing but volatile component of private capital flows in the 1990s, increasing more than thirteenfold from a mere \$3.5 billion in 1989 to \$47 billion in 1993 and subsequently falling sharply to \$22 billion by 1995. The surge of portfolio equity flows in the 1990s has helped integrate the emerging stock markets into global capital markets, but it also brings concerns about the volatility of these flows and their sustainability. Private capital flows, however, remain concentrated in a few developing countries, most of which are in Latin America and East Asia (Figure 2 and 3).

Figure 2

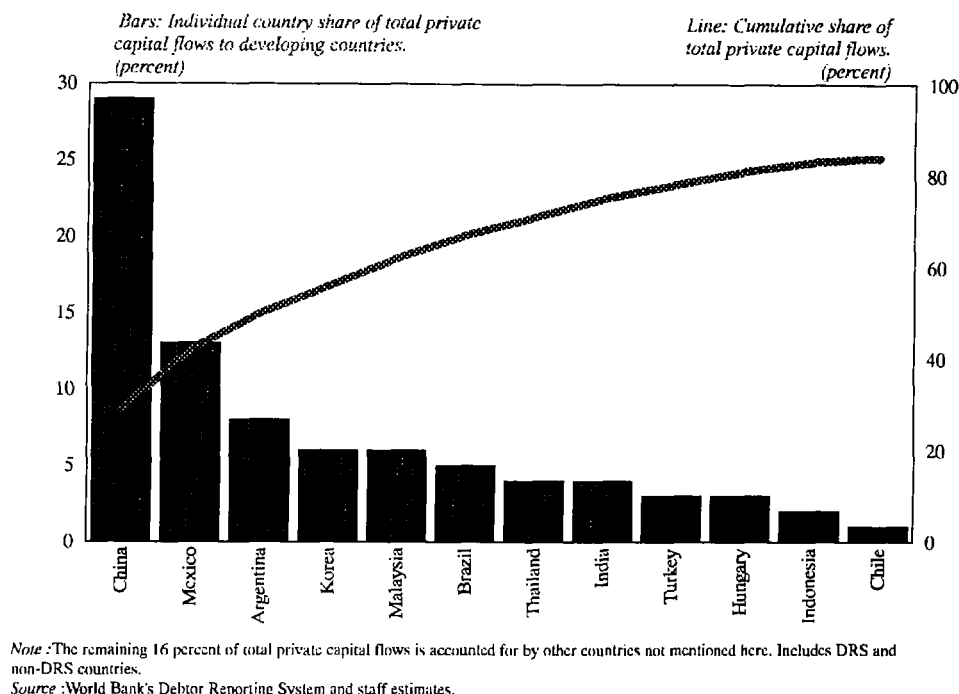
**Geographical Distribution Of Private Capital Flows,
1990 - 1994**



Source: World Bank Data and staff estimates.

Figure 3

Major Recipients Of Private Capital Flows, 1991-94



In the first half of 1994 one observed corrections in several overvalued emerging stock markets and a sharp cutback in portfolio flows (through bonds and equities) to some developing countries. Even though there has been a slowdown in the growth of private capital flows to developing countries since 1994, certain elements of these flows have been more stable than others. Notably, foreign direct investment has continued to grow. Since 1990 the share of developing countries in global FDI has been increasing sharply.⁴ Recent developments in Mexico (with a 40 percent devaluation of the Mexican peso and a doubling of short term interest rates between December 20, 1994 and January 4, 1995) have also shaken investor confidence and led to portfolio outflows. These episodes have renewed concerns about the sustainability of private capital inflows to developing countries over the medium term. Moreover, for individual countries, managing the volatility of these flows brings about additional macroeconomic and financial sector

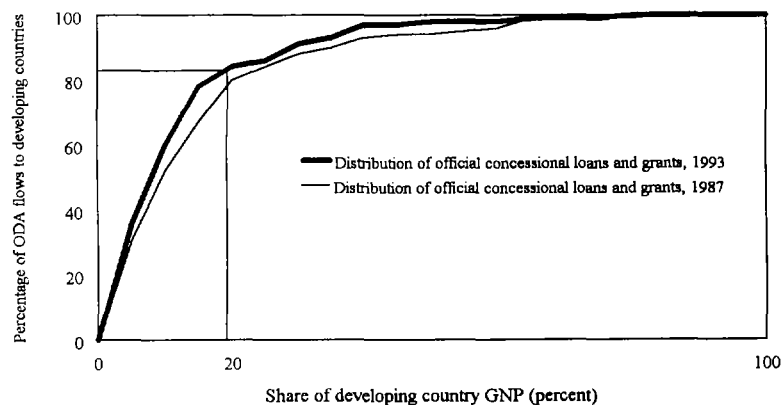
⁴ Source: World Bank, *World Debt Tables, 1994-95*, Volume 1

challenges and represents a priority area for the fruitful sharing of experiences and policies across recipient countries. Cross country research in this area is still at a nascent stage as relevant data only recently became available for a few recipient countries. Lack of consistency and completeness of the available information has also precluded any rigorous econometric work in this area. Although, some studies on the policy implications and the management of private capital flows in developing countries are beginning to appear in the profession, this remains a very fertile area for further research.

There has also been a change in the destination of these foreign financing flows to developing countries in the 1990s. The overall composition of aggregate resource flows to developing countries by income group has now become a function of access to international capital markets. On the whole, the middle-income countries enjoy market access. Among low-income countries, China and India have recently raised substantial resources from the international capital markets, while the smaller low-income countries continue to depend on official sources of financing.

Figure 4

Eighty four percent of official concessional loans and grants goes to the poorest 20 percent



Note : Sorted by GNP per capita, the X-axis represents the share of developing country GNP, starting from the poorest country. All countries reporting through the DRS since 1987 are included.
Source : World Bank, Debtor Reporting System (ODA), and national accounts (GNP per capita using the Bank Atlas method).

The share of overall official flows to developing countries that is directed to low-income countries has increased, although the overall level of these flows has remained stable in the 1990s. Concessional flows are even more heavily concentrated in low-income countries (Figure 4). There has also been a shift within official concessional flows from loans to grants. Sub-Saharan Africa continues to receive the highest share of official flows among developing regions. Meanwhile, OECD donor country budgets are under increasing strain due to recession and increasing number of new claimants with the transformation of the former centrally-planned economies. This stagnation in new official flows has made it particularly difficult for the heavily indebted poor countries. They are not receiving significant amounts of private capital flows and also face severe external debt burdens. The World Bank's World Debt Tables, 1994-95 highlights the need to assess the debt sustainability of these severely indebted low income countries (SILICs) on a country-by-country basis, with particular reference to their export growth potential over the long run and the outlook for the availability of concessional finance (including grants) or private capital to finance the needed imports and cover debt service. Specifically, it is stated in the World Bank's *World Debt Tables* that:

“In assessing the severity of the debt problem of individual SILICs, it is appropriate to address two aspects of a country's debt profile. One is the extent to which existing debt servicing obligations pose a liquidity constraint, as reflected by the inability to service currently scheduled payment. The second is the extent to which the debt overhang represents a sustainability or solvency problem in the form of unsustainable future debt servicing requirements.” [Source: World Bank, *World Debt Tables*, 1994-95, Volume 1, p. 39].

The SILICs have had to repeatedly reschedule their external debts through the 1980s and 1990s. Partly as a result of this, debt stocks of this group of countries has continued to mount, reaching an estimated US\$209 billion in 1994, almost four times the nominal value of debt in 1980.⁵ This is true despite substantial forgiveness by bilateral creditors and grant financing. In addition, repeated reschedulings also impose a cost on the

⁵ Source: World Bank's *World Debt Tables*, Volume 1, p. 220.

debtor country in terms of the time spent by their key officials in Government at negotiations with external creditors and donor Governments. There remains the need for further debt stock reduction in these countries, most of which are in Sub-Saharan Africa, on a case-by-case basis. In doing so, it is important to take into account their significant differences in indebtedness and ongoing policy reforms in these countries.

Table 1. Severely Indebted Low-Income Countries
Debt Restructuring

	<i>1988</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>
Total amount rescheduled	7,282	13,262	6,414	6,206	6,081	2,027	3,572
Debt Stock rescheduled	1,877	5,941	358	714	2,060	261	0
Principal rescheduled	1,253	4,533	3,898	3,284	2,177	1,054	2,061
Official	788	1,839	2,846	1,856	1,431	588	1,359
Private	465	2,694	1,052	1,428	746	466	702
Interest reschedule	707	2,141	1,827	1,744	1,109	566	1,442
Official	566	1,391	1,507	1,406	710	378	1,167
Private	140	750	320	339	399	188	275
Principal forgiven	510	2,105	1,409	1,396	685	800	2,064
Memo: interest forgiven	14	102	95	346	101	158	358
Debt stock reduction	261	305	354	546	3,632	181	476
of which debt buyback	0	0	0	190	1,335	26	8

Source: World Bank, *World Debt Tables, 1996*. Volume 1, pp. 223.

II. Was the “Lost Decade” really a loss?

The advent of the international debt crisis, which started with Mexico declaring a moratorium on debt service payments to its foreign commercial bank creditors in August 1982 led to what is often termed as the “lost decade” in terms of new international financial flows to developing countries. The period of the late 1980s was one of financial consolidation and retrenchment by private creditors (mainly commercial banks) from lending activities in developing countries. Their developing country exposure was reduced and loan-loss reserves were enhanced. A secondary market for developing country debt began to show signs of emerging as banks who wanted to “unload” their positions on developing country liabilities began to seek buyers of these discounted securities. In the debtor economies two forms of adjustment to the cutoff of external finance became necessary: (i) generating a trade surplus in the balance of payments and thereby increasing

external transfers, and (ii) a fiscal adjustment and an internal transfer from the private to the public sector. Today the binding constraint in most severely indebted middle income countries of the early 1980s is fiscal not external.

The same period was by no means a “loss” in terms of the analytical papers that were produced in the economics profession that tried to address the possible causes of the debt crisis (both from the micro and macro points of view), the possible implications of the crises and the policy options to deal with the crisis that followed from these analyses.

The seminal work by Eaton and Gersovitz (1981) provided an explanation about why international lending was possible in the presence of the risk of repudiation by the debtor country. A comprehensive survey of the subsequent research on the crucial distinction between a country’s “ability-to-pay” and “willingness-to-pay” is provided in Eaton, Gersovitz and Stiglitz (1986). Gersovitz (1985) suggested three ways of defining the “cannot-pay-position” (or insolvency) from a debtor country point of view: (a) if the present value of debt service exceeds the present value of the debtor nation’s resources--the intertemporal budget constraint would not be satisfied; (b) if the present value of debt service exceeds the present value of the debtor nation’s trade balance--to the extent that the income from nontradeables is not available to external creditors; and (c) if the government is unable to raise the necessary revenues to make debt service payments on sovereign debt.

Studies concluded that a country would not default if there were enforceable costs that could be imposed by the creditors and that these costs (such as decreased access to trade credits, limited new financing or expropriation of offshore assets) are deemed to be larger than the benefits of repudiation (in terms of foreign exchange not being directed to debt service payments). This perceived benefit will be directly related on the size of a country’s debt. It was, therefore, in the interest of lenders to ration credit to levels below which this incentive to default on the part of the debtor country is kept below the perceived costs of repudiation.

Cline (1983), Krugman (1985) and Sachs (1983) suggested the thesis of “involuntary lending” on the part of creditors to countries where the outstanding debt was already very high. This was justified on the grounds that these new loans would give the countries time to adjust their economies and increase their future foreign exchange earning capacity so that, in the long run, they would eventually pay off their entire debts in full. This was partly the rationale behind what was called the “Baker Plan” (1986-88), which was implemented as the strategy for dealing with the severely-indebted middle income countries that were at the time facing severe debt servicing difficulties on their debts owed to foreign commercial banks.

As the creditor bank’s reduced their developing country exposures and their financial positions improved, individual banks began to show reluctance to participate in concerted new money packages. Bank Steering Committees were becoming less effective in preventing “free-riders” in commercial bank restructuring agreements and creditor governments became less willing (and able) to use moral suasion on their (stronger) commercial banks to ensure participation in these deals. At this time there were three major developments in the profession regarding research on developing country debt. Broadly speaking, these were:

i) *The "Debt-Laffer Curve" argument* (Krugman (1988)) which, simply put, says that debt repayment may be viewed as a tax imposed by external creditors. If the stock of debt outstanding of a country is large enough to cause a severe debt burden on the debtor country, it will not have any incentive to improve its well-being in order to repay its debt. By granting debt relief, and hence, lowering the stock of debt below the critical level, creditors would improve their chances of getting repaid and, in turn, of increasing their revenues. Theoretical analyses of this debt overhang problem emerged with papers by Sachs (1986), Krugman (1988), Froot (1989), Claessens and Diwan (1990) and Cohen (1990). Empirical estimation of the “Debt Laffer Curve” argument by Borensztein (1990), Claessens (1988) and Cohen (1990) were inconclusive, partly due to data limitations.

Some studies, such as Faini and de Melo 1990; Green and Villanueva (1991) and Serven and Solimano (1991), have shown that the debt burden has an adverse effect on investment.

ii) ***The Market-based Menu Approach.*** The realization that the diversity of external creditors precluded the possibility of using a single option for reducing a debtor country's external debt obligations (with tax, accounting and regulatory factors, along with the long term business interests of banks in a particular region playing a key role). This resulted in the need to devise debt restructuring "packages" consisting of different market-based menu of options such as new money, cash buybacks, debt equity swaps, among others. Papers presented at the World Bank Symposium on "Dealing with the Debt Crisis" (See Husain, Ishrat and Ishac Diwan (1989)) tackled the viability of such an approach to dealing with the debt burdens of the severely-indebted middle income countries and examined country case studies (e.g., Brazil) that had adopted this approach in their agreement with commercial bank creditors. A seminal paper by Bulow and Rogoff (1988) distinguished between the "average price" and "marginal price" of a debt buyback operation to evaluate the benefits of a debt reduction operation to the debtor.

iii) ***The secondary market price of developing country debt.*** With increasing importance in debt renegotiations between a debtor country and its commercial banks, this led to an urgent preoccupation in the profession to devise models which forecast the secondary market price of a country's debt. The secondary market price (SMP) of a country's debt is crucial in the context of debt reduction. It has played a vital role in determining the price at which a buyback will occur. Although the sovereign debt paper of a country is traded at a discount on its face value, there are a variety of actions a debtor country can take to affect their future ability to make resource transfers, e.g., exchange rate adjustment, investment, budgetary policies, etc. This will in turn trickle down to the secondary market price for its debt. Krugman (1988) has stated that the secondary market discount is just another aspect of the fact that new lending is unprofitable when viewed in

isolation but it may be deemed essential by existing creditors for them to get repaid in future.

In addition, numerous studies were conducted to examine the external and internal dynamics of foreign debt. Simonsen (1988) has shown that the relationship between debt, foreign exchange earnings and the interest rate can be reduced to the relationship between the rate of growth of exports and the international interest rate. Selowsky and van der Tak (1986) have shown that the outcome of a growth oriented debt strategy hinges critically on the growth rate of domestic savings and on the relationship between consumption and GDP growth in the debtor country. Sweder van Wijnbergen (1988, 1989) highlighted the relationship between external debt and internal debt by focusing on a government budget constraint which includes the activities of the Central Bank. This provided a framework for evaluating the consistency between fiscal deficits and other macro-economic targets in the debtor country.

The afore-mentioned studies are only a few of the vast literature that comes to mind on the analytical research that went behind finding the ways in which the external debt related policy issues could be tackled in the late 1980s. Meanwhile, the debt problems of the severely-indebted low income countries still remain. The debt burden of these countries is mainly due to official creditors. Research is currently underway to find ways of tackling this policy dilemma as well. A major impediment so far has been the lack of reliable and consistent data on key variables that would allow for rigorous economic analysis of these policy questions.

On the policy side, developing country debt to commercial banks began to be restructured under the “Brady Plan” (for severely indebted middle-income countries). Under this initiative banks agreed to negotiate debt and debt service reduction (DDSR) agreements that would contain a market-based menu of options which participating banks had to choose. Some of these instruments contained “enhancements” (such as interest and/or principal collateralization). Funds for these enhancements and other up-front costs

related to these DDSR operations were provided to eligible countries from official sources (including the World Bank and the International Monetary Fund). For the low-income countries, the World Bank established the Debt Reduction Facility for IDA-only countries (i.e., those World Bank member countries that were eligible for concessional lending only). This Facility provided resources, along with other official donors, to execute a buyback of all uninsured commercial debts (owed to private creditors) at substantial discounts on the face value of these claims.

III. And towards the 21st Century the Challenge Continues...

The rapidly changing nature of development finance in the 1990s has brought with it new concerns and questions among policy makers that still need to be addressed. The surge of private capital flows has brought with it concerns about the volatility of asset prices and volume of capital inflows, especially portfolio equity inflows, in developing countries. It has raised concerns about the appreciation of the real exchange rate that may undermine ongoing reform efforts of the recipient countries. It has heightened the need to understand the destabilizing effects of these surges of private capital flows (in and out of a country) on the domestic financial system. The involuntary reserve accumulation (and depletion) that often accompany these surges have led to concerns among policy makers about the loss of independence of monetary policy under a very volatile environment.

Efforts within academia to answer these policy questions in the context of the so-called “emerging markets” were delayed by the need to first obtain reliable and consistent information on the size and composition of private capital flows. Several recipient countries have only until recently begun to put in place the institutional machinery needed to monitor these transactions effectively, especially those involving portfolio investment by foreign residents. Recently available portfolio flows data compiled by the World Bank (Gooptu (1993), World Bank (1994)) and the International Monetary Fund (IMF 1994, 1995) have permitted econometric studies to be undertaken in this regard. However, important contributions have been made through analytical work produced in the last two

years or so that have provided at least some answers to the policy questions that one is grappling with in regard to the private capital flows. Some of these are discussed below, although, much work still remains to be done.

Studies that have looked into the determinants of the large private capital inflows to developing countries include the seminal work by Calvo, Leiderman and Reinhart (1993) which examined the capital inflow episode in 1988-1991 in 10 Latin American countries. Using monthly data on international reserve changes as a proxy for capital inflows they concluded that external “push” factors (beyond the control of the recipient country), such as the decline in interest rates and the recessionary environment in industrialized countries (particularly in the United States), were the primary determinants of the observed surge in private capital flows, particularly portfolio equity inflows, to developing countries in the early 1990s. Lower interest rates make it less attractive at the margin for investors to keep their investible funds at home (the “asset substitution channel” *a la* Goldstein (1995)) and improves the creditworthiness of a debtor country by raising the discounted present value of resources available for meeting external debt service obligations and by lowering the discounted present value of future debt service payments on its floating rate debt (the “creditworthiness channel” *a la* Goldstein (1995)). This result was supported by Dooley, Fernandez-Arias, and Kletzer (1994), who examined the behavior of the secondary-market price of a country’s sovereign debt since 1989 as a sensitive proxy for capital inflows. Their rationale being that changes in the demand for claims on a developing country, whether emanating from changes in domestic or external factors should be reflected in the prices of that country’s sovereign debt. Fernandez-Arias (1994) used quarterly estimates of portfolio inflows (through bonds and equities) for thirteen countries, rather than proxies for capital inflows that were used in the aforementioned studies, to show that over 85 percent of the inflows to these countries since 1989 was explained by the decline in international interest rates.

Domestic “pull” factors, such as improved domestic policies and sustained high growth performance in the recipient countries, have also contributed to the surge in

private capital flows to developing countries in the 1990s. Improved domestic policies include capital account liberalization, better macroeconomic and structural policy fundamentals, a sizable turnaround in their fiscal positions relative to GDP (i.e. from a deficit to a surplus), trade liberalization, and privatization efforts. Chohan, Claessens and Mamingi (1993) examined monthly bond and equity flows from the United States to nine Latin American and nine East Asian countries over the period July 1988 to July 1992 to find that external factors were much more important for portfolio inflows to Latin America than for the countries in East Asia. Schadler et. al. (1994) reaffirm the importance of the “pull” factors by observing that the timing of the relevant external (push) factors did not coincide with the surge of private capital inflows in each recipient country. The persistence and intensity of the inflows has varied across recipient countries. In addition, there has been a geographical variation in the distribution of these flows with over 80 percent of the private capital inflows between 1989-1994 going to a score of countries. This suggests an important role of domestic factors in determining the size and composition of private capital flows to developing countries. Fernandez-Arias (1994) found that some push (such as, country creditworthiness) and pull factors (such as, international interest rates) that influence private capital flows in a country may be inter-related. Claessens and Rhee (1994) show that the removal of barriers by developing and industrial countries on foreign participation in developing countries’ securities markets has been a significant factor that has contributed to this surge of private capital flows to the emerging markets. These measures include the removal of restrictions on foreign ownership, liberalization of capital account transactions, improved general accounting principles, addressing the financial securities clearing and custodial problems, and enhanced disclosure requirements by securities issuers.

In September 1993, a World Bank Symposium on Portfolio Investment in Developing Countries brought together academics, policy makers and investment bankers to discuss the motivation and implications of the surge of portfolio investment to the emerging markets (for proceedings see Claessens and Gooptu (1994)). This conference presented recent analytical work towards understanding the nature and impact of private

capital flows in developing countries. Issues addressed included the benefits and costs of portfolio investment in developing countries, the associated volatility of asset prices and volumes. In addition, recent studies have tested for the segmentation (or integration) of developing country stock markets with world capital markets. Studies based on asset prices, which are more readily available for developing countries' securities, have shown that until the mid-1980s, emerging markets were not integrated with world financial markets. Actual portfolio investment flows data also suggest that the emerging markets are becoming increasingly integrated (see Frankel (1994) and Claessens (1995)). Models that have examined the risk-return trade-off from emerging market portfolio investments have concluded that there are, indeed, significant diversification benefits from investing in these markets relative to asset portfolios that focus solely on industrial country securities. For example, Divecha, Drach and Stefak (1992) and Harvey (1993) have shown that the risk-return trade-off can be Pareto-improved through an dramatic upward shift in the unconditional mean-variance frontier if about 20 percent of an internationally diversified asset portfolio is invested in developing country securities.

On the recipient side, the issue of "appropriate" policy responses to the recent surge in private capital flows to developing countries has required attention. Studies by Corbo and Hernandez (1994) and Schadler et. al (1994) have provided a comparison of the experiences of countries in Latin America and Asia. They have tried to separate the external (push) from the domestic (pull) determinants of these flows in order to analyse the policy instrument a country would use to counteract the adverse effects of private capital inflows and outflows. The policy questions addressed include those related to exchange rate policy (exchange rate bands with a crawling peg, managed float or a fixed exchange rate regime), sterilization policy (when to sterilize, how and for how long?), fiscal policy (whether fiscal tightening is followed in a country or not in the face of a surge of private capital inflows depends on whether policy makers perceive these inflows to be temporary or permanent), regulatory and supervisory policy (whether to impose capital controls and, if so, on which type of flow and for how long?). Goldstein (1995) and IMF (1995) provide a survey of related studies and actual events in recipient countries.

Another question that is currently in the minds of policy makers is the sustainability of private capital flows to developing countries over the medium term. This issue has become increasingly important after the Mexican peso crisis of December 1994 with concerns among policy makers about its contagion (or spillover) effect on other emerging markets, especially those in Latin America (see IMF (1995) for details on the events that led to the Mexican peso crisis and its aftermath). Analytical research on the sustainability of private capital flows has so far only provided preliminary answers, partly because of the fact that there are still inadequate data points on which to base robust forecasts of these flows. Some ongoing studies in the profession are examining each type of private capital flow (such as, foreign direct investment, portfolio investment, project lending, closed-end and open ended investment funds, american and global depository receipts (ADRs and GDRs), licensing, venture capital, quasi-equity contracts, private non-guaranteed debt and other forms of private non-recourse financing to private borrowers) and looking into their determinants and investor sources in order to arrive at a view about their sustainability over the medium term. The way countries deal with these flows and the sustained nature of their reform efforts will be important ingredients for sustainable capital inflows over the long term. Hernandez and Rudolph (1995) and Gooptu (1994) suggest that developing countries must compete with each other for the pool of private voluntary capital allocated by portfolio managers to emerging market securities. Developing countries that undertake adequate domestic economic and institutional reform should continue to expect capital inflows. This remains a fruitful area of further research.

The interaction of official and private financing to developing countries is also crucial in assessing the sustainability of private flows, especially in countries where the public sector remains a dominant player in consumption and investment decisions in a country. In addition, the role of the domestic financial system under capital inflows cannot be ignored in this regard. With increasing holdings of local currency denominated fixed income securities (such as Mexican *cetes* and *tesobonos*) by foreign investors, the line between external debt and domestic debt is becoming blurred. Sustainability of capital

flows is, therefore, becoming intrinsically related to debt sustainability of a country. Theoretical and applied economic research on these issues, with special reference to developing countries, is still forthcoming.

In conclusion, it is safe to say that the task of keeping up with and explaining economic phenomenon in the ever-changing international financial arena has become a complex one. When it comes to developing countries, mere application of analytical models that were originally developed for industrialized economies will often be preempted by the lack of timely, consistent and comprehensive data series on developing countries. Nevertheless, a lot of progress has been made in the profession in addressing policy questions related to external debt and finance in developing countries and relevant research is ongoing.

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